

REMARKS/ARGUMENTS

Favorable reconsideration of the present application is respectfully requested.

Claims 1-9 were finally rejected under 35 U.S.C. §103 as being obvious over Tojo et al in view of Saito et al. Applicants herein reiterate the arguments made in the previously unentered response of March 30, 2011, which are hereby incorporated by reference. For example, Applicants argued that while the inlet of the HF gas line in Tojo et al may become exposed to the purge gas as the electrolyte level falls from the level of Fig. 4, in this case it will no longer be disposed in an electrolyte in an electrolytic bath. Therefore, in no case is there an inert gas substitution means in Tojo et al for eliminating hydrogen fluoride gas remaining in the HF gas feed line *while* the hydrogen fluoride gas inlet is disposed in the electrolyte in the electrolytic bath.

The Advisory Action replied to this argument by pointing out that the HF gas line in Tojo et al may be disposed in the electrolyte in the electrolytic bath. This is not disputed for certain times in the functioning of the Tojo et al system (see Fig. 4), but the gas from the “inert gas substitution means” comprised by the port 14 will not be able to reach the HF gas line during such times when the HF feed line is immersed: there is no inert gas substitution means in Tojo et al for eliminating hydrogen fluoride gas remaining in the HF gas feed line *while* the hydrogen fluoride gas inlet is disposed in the electrolyte in the electrolytic bath.

More fundamentally, the claims recite that the “inert gas substitution means” has the function of eliminating the hydrogen fluoride gas remaining in at least part of said line while the hydrogen fluoride gas inlet is disposed in the electrolyte in the electrolytic bath, and to substitute an inert gas therefor. The corresponding disclosed structure is the inert gas feed line 91 which connects the inert gas storage tank 92 to the HF gas feed line. Since the inert gas is there fed within the HF gas feed line, the inert gas substitution means is able to eliminate the hydrogen fluoride gas and substitute an inert gas therefor even while the inlet of

the hydrogen fluoride gas inlet is disposed in the electrolyte in the electrolytic bath. Neither the claimed function nor an equivalent structure is present in Tojo et al.

More particularly, the only teaching in Tojo et al is to equalize the fluid level by feeding an inert gas (col. 3, lines 5-7). To the extent that the fed inert gas in Tojo et al lowers and equalizes the fluid level in the cathode chamber 7, it prevents backflow of the bath liquid into the immersed HF line -- but does not substitute an inert gas in the immersed HF gas feed line. When the inert gas is able to reach the HF gas feed line, it is not in a condition of being immersed, and so the claimed function is not satisfied.

Also, the structure for such fluid level equalization – the introduction of the purge gas into the port 14 of the cathode chamber – is not equivalent to the inert gas feed line 91 in the present application since it does not feed the inert gas directly to the HF gas feed line. Instead, the purged gas only indirectly reaches the HF gas feed line from the cathode chamber 7 when the inlet of the HF gas feed line is exposed. Thus, neither the claimed function nor an equivalent structure is present in Tojo et al.

Finally, one skilled in the art would not have replaced the pressure equalization system of Tojo et al with one equivalent to the claimed “inert gas substitution means” in view of the teachings of Saito et al. As already mentioned, the N₂ gas in Saito et al is introduced into the reaction tube when it is in a vacuum state, whereby the problem of backflow and solidification of a liquid due to a negative pressure downstream of the cut-off valves VB1-VB2 would not arise.

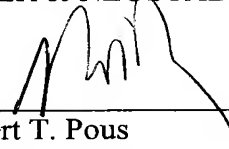
Additionally, one skilled in the art would have had not motivation to replace the pressure equalization system of Tojo et al, irrespective of the teachings of Saito et al. The pressure equalization system of Tojo et al solves the problem of level control and also solves the problem of preventing backflow when the end of the HF gas line is immersed in the bath. There would have been no reason for one skilled in the art to have devised another means for

further preventing backflow in Tojo et al. Therefore, one skilled in the art would not have replaced the pressure equalization system of Tojo et al with one equivalent to the claimed “inert gas substitution means” in view of the teachings of Saito et al.

Applicants therefore believe that the present application is in a condition for allowance and respectfully solicit an early notice of allowability.

Respectfully submitted,

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